HEMORRHAGIC PANCREATITIS FOLLOWING THYROIDECTOMY*

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ONE may say, of course, as appears likely, that the development of acute pancreatic necrosis immediately following a subtotal thyroidectomy in a hyperthyroid patient was merely coincidental. However, acute pancreatic necrosis is most commonly seen in the obese hypothyroid type of individual, rather than in the thin hyperthyroid. A search through the literature has revealed that its occurrence following thyroidectomy is quite rare.

The only other case noted is that of W. R. Morris[1] in which, fifteen hours following the removal of a large substernal adenomatous goiter in a decompensated female of fifty-six years, the patient complained of marked abdominal pain and vomiting, presenting a very tender abdomen. All symptoms increased in severity, shock followed and the patient died thirty-eight hours after surgery. Autopsy revealed fat necrosis of the pancreas, mesentery and retroperitoneal tissue, thrombosis of the intrapancreatic veins, and necrosis of the pancreatic ducts. The impression given was that the pancreatic lesion was on a vascular basis, due to intrapancreatic venous thrombosis.

In the case to be discussed there was no question of cardiac decompensation; the patient was definitely a hyperthyroid, and the acute pancreatic lesion apparently developed at the time of, or immediately following, surgery.

REPORT OF CASE

The patient, a young man of twenty-eight, employed as a foundry laborer, entered the hospital March 20, 1936, with the following complaints: nervousness, palpitation of the heart, and loss of weight. Nervousness had come on about two years previously, and with cardiac consciousness and tremor of fingers had become progressively worse. He had lost approximately twenty pounds in weight during the past year. in spite of a good appetite.

Physical Examination.—On physical examination he appeared quite restless and thin. There was a definite staring expression to his eyes, and a fine tremor of tongue and fingers was noticed.

The thyroid gland was diffusely enlarged, smooth, and firm. The heart beat was quite forceful, blood pressure 138/60, heart rhythm regular, and the rate ranged from 96 to 108. The abdomen was negative. There was no sugar in the urine, and the basal metabolic rating was plus 49.

The patient's symptoms improved with bed rest, sedation, and Lugol's (gtts. V. t. i. d.), and on April 1, ten days after admission, subtotal thyroidectomy was performed under cyclopropane anesthesia.

Postoperative Course.—The operation ran smoothly; at its close, while the skin clips were being inserted, the patient began to vomit. Within a few minutes he began to complain bitterly of pain in the pit of the stomach. There was exquisite tenderness in the epigastrium, with almost board-like rigidity of both upper recti. Pain and vomiting became more severe. Morphin did not relieve the pain, the pulse became quite rapid, and signs of shock and circulatory collapse followed within two hours. The pulse mounted to 160 to 200, and blood pressure dropped to a systolic of 60.

The skin became cyanotic and there was profuse perspiration. The temperature steadily rose until it was 107 degrees Fahrenheit at his death. Acacia solution, adrenalin, and other stimulants could not elevate his systolic pressure over 80. The diagnosis of acute pancreatitis was considered likely before death, which occurred thirty hours after surgery.

Autopsy.—At autopsy the region of the thyroidectomy showed no abnormalities. The peritoneal cavity contained about 100 cubic centimeters of burgundy-colored fluid. The external capsule of the pancreas contained areas of recent hemorrhage and fat necrosis, as did other retroperitoneal tissue. The gall bladder and bile ducts were normal. There was complete hemorrhagic necrosis with softening and partial liquefaction of the head of the pancreas and adjoining part of the body.

COMMENT

The relationship between the thyroid gland and the pancreas is still more or less obscure. It is known that increased function of the thyroid gland depresses or inhibits pancreatic activity. This is evidenced by a diminished carbohydrate tolerance in Graves's disease. Removal of the thyroid gland seems to render the pancreas hyperactive. In myxedema large quantities of sugar may be injected without producing glycosuria.

That there is a disturbed carbohydrate metabolism in thyroid disease is seen also by the incidence of diabetes mellitus associated with hyperthyroidism. In both diseases one may find hyperglycemia, glycosuria, marked wasting of the body, polyuria, fatty stools, and excessive hunger and thirst. It has been suggested in the past[2] that uncontrollable diabetics be subjected to a thyroidectomy.

Experimentally, it has been shown[3] that feeding thyroid tissue to the rat has resulted in a decrease in size of the pancreatic alveoli and alveolar cells, a variation in size and staining power of the nuclei, and an increase in mitotic figure. These changes disappear on withholding thyroid.

Postmortem examination of the pancreas[4] in cases of hyperthyroidism has revealed atrophy of Langerhans' islet with leukocyte infiltration and areas of necrosis.

All this does not give any direct explanation for the case above described, which is, however, presented as additional suggestive evidence of disturbed pancreatic function in thyroid disease.

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1 Morris, W. R.: J. A. M. A., 100:1594 (May 20), 1933.

2 Fitz, R.: Arch. Int. Med. Vol. 305 (March 15), 1921.

3 Kojina, M.: Quart. Janon Exper. Physical, London, 1:222, 1917.

4 Pettenvel: Quoted in Hertzler, "Diseases of Thyroid Gland."

Public interest in hygiene and health can be made effective only when it can be concentrated in the carrying out of a definite plan. Our attention is now being focused on the control of causes of mortality of persons not only among the younger groups, including babies and children. but among adults who should be in their physical prime. The mortality of persons who ought to be in full mental vigor and still capable of many kinds of physical work is over three times that of the younger adults. Organic heart disease, tuberculosis, cancer, and pneumonia account for more than half of the deaths between the ages of thirty-five and forty-four—an age period too young for the vital spark to be dimmed. We should no longer squander the vitality of our grown men and women. The task of health conservation is being broadened in this State to include adults as well as children.—Governor H. H. Lehman of New York.